ANALYSIS OF THE CONCENTRATION IN GROWTH POTENTIAL OF ORGANIC AGRICULTURE AT THE LEVEL OF EU MEMBER STATES

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Abstract: *Recent aspects of European and global economy reveals that consumer demand for organic products is growing and this provides the opportunity to develop a sustainable agriculture. However, while there is a visible new approach in all European countries on the management of organic farming, there are major differences in the growth potential of thereof nationally among the EU Member States, both in terms of areas used organic agriculture but also, total utilised agricultural area and total organic operators (agricultural producers). On based on the dataset available on Eurostat database for the years 2013 and 2014 on organic farming, the study aims to identify differences in the growth potential of organic agriculture between EU member states appealing to statistical methods specific to the analysis of the concentration, as a measured tool of their convergence. It involved the use of Lorenz curve and Gini-Struck coefficient to identify a model of the European organic agriculture concentration regarding the organic farming considered indicators, given that, their specific and changes differs considerably from one EU member state to another.*

Keywords: *organic farming, Lorenz curve, Gini-Struck coefficient, European Member States*

JEL Classification: C82, Q01, Q15

INTRODUCTION

In literature with related topic, there are a lot of definitions of the term ”organic agriculture”, but all of them consider its environmental and social impacts by eliminating the use of synthetic inputs, which are replaced with traditional specific practices that maintain and increase long-term sustainability of soil fertility and prevent pest and diseases. Even though consumer demand for organic products is concentrated mainly in the developed economies while the member states gave different attention to organic farming, at the level of EU, it registered a rapid growth in the last years. Since the 1990s, organic farming was extended in Europe, the increasing of the operated ecologically area being significant, the organic farming sector being in continuously developing, registering significant increases from year to year. This is the result of political support for the realization of organic farming offered by the governments of each country and the EU, but also due to the growing demand for organic products from consumers. Agriculture plays an important role in the economy of member countries EU, supported both by share of employment in agriculture and the contribution to their gross domestic product. Organic farming is subordinate to sustainable development and sustainable farming systems, but the transition from conventional agriculture to organic takes time because economic structures do not feel the effects of fall in productivity, and manufacturers to gain confidence in ecological systems. Organic farming does not require significant financial investment or large-sized farms but requires a higher workforce (Cicea, Subic&Pirlogea, 2010). Organic farming may represent the same time an opportunity for business development in rural areas, people are becoming more concerned about factors that directly influence health, such as food security and food quality, even for countries that still exists a high level of disparities between rural and urban, as Romania.

MATERIAL AND METHODS

The study aims to identify the potential of growth for organic agriculture at the level of the EU (28) member states, given the agricultural areas used by each country as a natural support for their conversion into organic area (fully converted and under conversion) and the number of organic operators, agricultural producers, for the years 2013 (the year of accession of Croatia, the 28th member country), and 2014, the year for which data are available for all member states for the

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consider variables. In the first part of the study, we presented a descriptive analysis of the spatial distribution of the variables: utilised agricultural area and utilized organic agricultural area, by countries, in the European Union (28), in the years 2013 and 2014 to identify the changes registered at the level of EU (28) and at the level of each member state. We identified the existence of excessive values - marginal and extreme and also the localization of the countries in their distribution and a correlation between them, and so, countries that have the geographical potential to increase organic production by extending surfaces used. The concentration, defined as an increasing accumulation in favor of a number more decreased of holders, expresses a state of inequality proportional to the degree of concentration. Thus, in the second part, to assess the degree of concentration of the sector organic agriculture in the EU (28) member states in 2014 compared to 2013 was used Gini-Struck coefficient based on knowledge elements provided by Lorenz concentration curve. Lorenz concentration curve (Lorenz, MO, 1905) applied to the study of spatial concentration of utilized organic agriculture area is a graphical representation of a system of two rectangular axes, of the points of coordinates (p_i, q_i), where p_i is the cumulative ratio of the organic operators (agricultural producers) and q_i is the cumulative ratio of organic agriculture area (fully converted area to organic production and area under conversion). Concentration Gini-Struck coefficient (Cs) is actually a form corrected Gini coefficient, which is a measure of inequality, too. (Minciu, R. 2004, p.43):

$$G_s = \sqrt{\frac{n \sum g_i^2 - 1}{n-1}},$$

where *n* is the number of categories and *gi* are the total share of each category. This concentration ratio can have values in the range [0, 1]. The minimum amount possible (Cs = 0) is independent of the categories considered, that gives to the coefficient a comparable advantage and facile interpretations. A value of 1 is reached when the concentration is at a maximum and the value 0 when there is a uniform distribution (Jaba E., 2002, p. 198). For the calculations statistical data of Eurostat, were used, as well as scientific publications and research results. The strong differences can be indicated in the level of development in organic agriculture, due different problems faced by these countries.

RESULTS AND DISCUSSIONS

With according to Eurostat data, the total organic area in the EU (28) fully converted area to organic production and area under conversion was 10.315.126 hectares in 2014 and it is on an upward trend. The increase in utilised agricultural organic area between 2013 and 2014 was 2.4 %, respective 0,14 % in the percentages of total utilised agricultural area. From 2013 to 2014, 16 countries recorded growths, but only three had growths of over 10 %, Croatia (23,1 %), Malta (385,7 %), and Slovakia (14,2 %) and that was because its contribution on the total area was modest in 2013 as in 2014. If we discuss in absolute values, Spain presented the highest increase (100.346 ha), followed by Italy (70.692 ha) and lowest increase presented Luxembourg 43 ha, and Malta only 27 ha.

Table no. 1 - Total organic area (fully converted and under conversion), 2013 and 2014

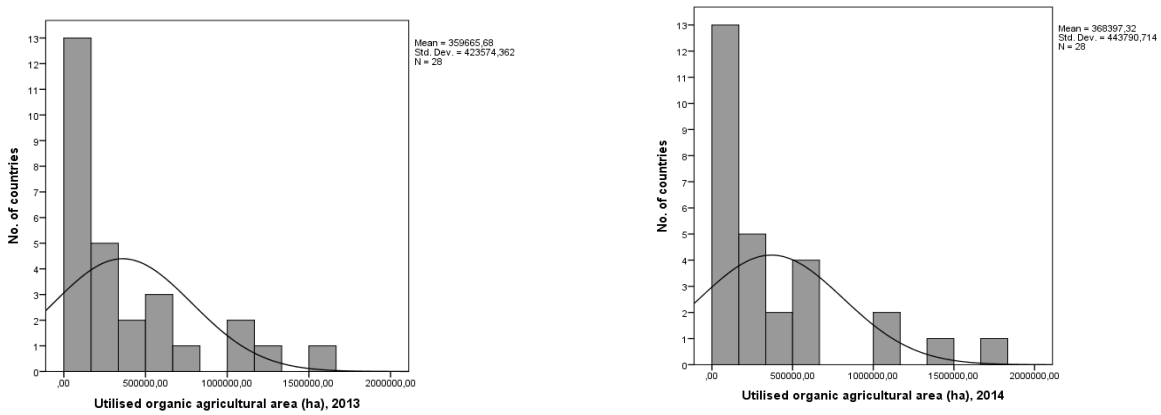
GEO/TIME	Utilised agricultural area		Utilised agricultural organic area						Percentage of total utilised agricultural area		
	2013	2014	2013		2014		Changes		2013	2014	Changes
	1000 ha	1000 ha	ha	%	ha	%	ha	%			
EU (28)	178.301,16	178.115,23	10.070.639	100	10.315.126	100	244.487	2,4	5,77	5,91	0,14
Belgium	1.338,57	1.333,40	62.471	0,62	66.704	0,65	4.233	6,8	4,78	5,10	0,32
Bulgaria	4.995,11	4.976,82	56.287	0,56	47.914	0,46	-8.373	-14,9	1,21	1,03	-0,18
Czech Republic	3.521,00	3.515,56	474.231	4,71	472.663	4,58	-1.568	-0,3	13,58	13,54	-0,04
Denmark	2.627,80	2.652,00	169.310	1,68	165.773	1,61	-3.537	-2,1	6,46	6,33	-0,13
Germany	16.699,60	16.724,80	1.008.926	10,02	1.033.807	10,02	24.881	2,5	6,04	6,19	0,15
Estonia	965,90	974,80	151.164	1,50	155.560	1,51	4.396	2,9	15,79	16,25	0,46
Ireland	4.477,77	4.465,77	53.812	0,53	51.871	0,50	-1.941	-3,6	1,09	1,05	-0,04
Greece	5.417,48	5.127,19	383.606	3,81	362.826	3,52	-20.780	-5,4	7,90	7,47	-0,43

Spain	23.494,57	23.571,78	1.610.129	15,99	1.710.475	16,58	100.346	6,2	6,91	7,34	0,43
France	28.975,97	28.929,82	1.060.755	10,53	1.118.845	10,85	58.090	5,5	3,82	4,03	0,21
Croatia	1.300,81	1.240,87	40.660	0,40	50.054	0,49	9.394	23,1	2,59	3,19	0,6
Italy	12.426,00	12.720,15	1.317.177	13,08	1.387.869	13,45	70.692	5,4	10,89	11,47	0,58
Cyprus	107,13	107,03	4.315	0,04	3.887	0,04	-428	-9,9	3,95	3,56	-0,39
Latvia	1.877,70	1.872,50	185.752	1,84	203.443	1,97	17.691	9,5	9,89	10,83	0,94
Lithuania	2.891,40	2.952,40	165.885	1,65	164.390	1,59	-1.495	-0,9	5,80	5,75	-0,05
Luxembourg	131,04	131,08	4.447	0,04	4.490	0,04	43	1,0	3,39	3,43	0,04
Hungary	5.339,53	5.346,30	130.990	1,30	124.841	1,21	-6.149	-4,7	2,81	2,68	-0,13
Malta	11,69	11,69	7	0,00	34	0,00	27	385,7	0,06	0,31	0,25
Netherlands	1.847,60	1.839,00	48.936	0,49	49.159	0,48	223	0,5	2,65	2,66	0,01
Austria	2.862,44	2.716,16	526.689	5,23	525.521	5,09	-1.168	-0,2	19,31	19,27	-0,04
Poland	14.409,90	14.424,20	669.863	6,65	657.902	6,38	-11.961	-1,8	4,65	4,57	-0,08
Portugal	3.716,43	3.701,28	197.295	1,96	212.346	2,06	15.051	7,6	5,42	5,83	0,41
Romania	13.904,64	13.830,42	286.896	2,85	289.252	2,80	2.356	0,8	2,20	2,22	0,02
Slovenia	478,89	482,21	38.664	0,38	41.237	0,40	2.573	6,7	7,96	8,49	0,53
Slovakia	1.928,51	1.924,73	157.848	1,57	180.307	1,75	22.459	14,2	8,30	9,48	1,18
Finland	2.258,60	2.267,20	204.810	2,03	210.649	2,04	5.839	2,9	8,97	9,23	0,26
Sweden	3.036,08	3.036,07	500.996	4,97	501.831	4,87	835	0,2	16,50	16,53	0,03
United Kingdom	17.259,00	17.240,00	558.718	5,55	521.475	5,06	-37.243	-6,7	3,22	3,01	-0,21

Source: Eurostat database (online data code: org_cropap, apro_acs_a)

For the other 12 EU Member States, the area of organic crops decreased in that time. Bulgaria and Cyprus were the most significant declines, with more than 10 %. However, as a share of the total EU (28) organic area, only four countries, Spain, Italy, France and Germany covered together almost 50 % in 2013 with 4.996.987 ha, respectively 51 % in 2014 with 5.250.996 ha (see Table 1). When referring to the share of the organic area in total agricultural surfaces of each EU Member State, rank on the first places Austria, Sweden, Estonia with percentages between 15 % and 19 %. In these terms, even if at the level of EU (28) we note an increase of 0,14 %, 11 countries had registered decreases on the share of organic farming in the total agriculture area. The size and changes of the organic area differ significantly from one country to another in EU (28).

To test if the variable considered, utilised organic agricultural area, has a normal distribution, for each of the years 2013 and 2014, was appealed the Kolmogorov - Smirnov statistically test (K-S) by using SPSS procedure. Sig. values K-S test, respectively 0.07 for the year 2013 and 0,061 for 2014, higher than 0.05 indicate that the variable has a normal distribution of data in both periods considered. The result was to retain the null hypothesis for both distributions. To have a graphic picture for the extremes of the variable, and also the values for maximum and minimum limits, so that extremes are clearly identified and having a visualisation of differences between empirical and theoretical distribution have used the histogram.



a) b)

Figure 1 – Distribution of the EU (28) member states by the utilised organic agricultural area, in years 2013 and 2014

It is noticed that the density function differs for the total organic agricultural area, both in year the 2013 and also in 2014. Distribution of countries by utilised organic agricultural area

indicates a mean and a Std. Deviation that are higher in 2014 than in 2013. While the two countries with extreme values Spain placed first, and Malta the last in the hierarchy in terms of utilised organic agricultural area, increased their level in 2014 compared to 2013, the gap between them increased, too (Table no.2).

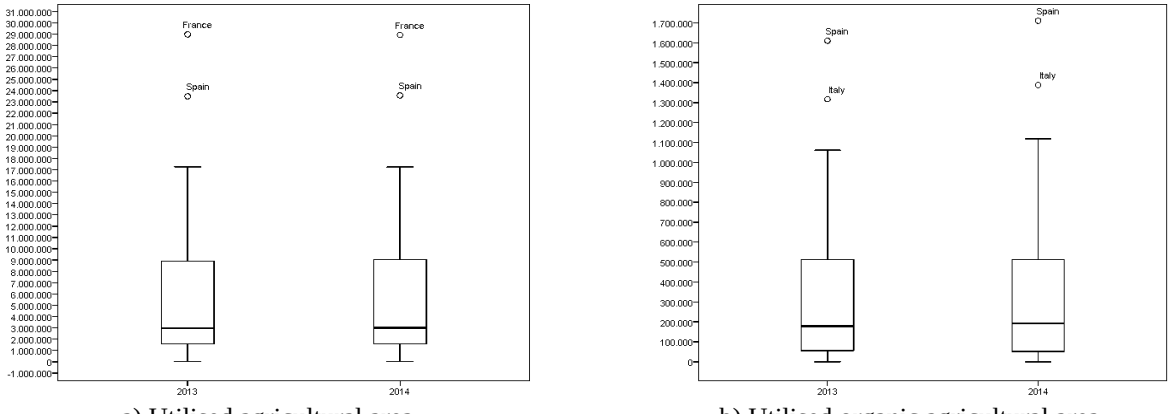
Table no. 2 – Statistics of the main indicators of agriculture

		Utilized organic agricultural area,_2013	Utilized organic agricultural area,_2014
N	Valid	28	28
	Missing	0	0
Mean		359.665,6786	368397,3214
Median		177.531,0000	191875,0000
Std. Deviation		423.574,36190	443790,71354
Sum		10.070.639,00	10.315.125,00
Quartiles	1st Quartile	54.430,7500	50508,2500
	2nd Quartile	177.531,0000	191875,0000
	3rd Quartile	520265,7500	516564,0000

Source: Calculated with SPSS

In the year 2013, 50 % of European Union - 28 countries: Malta, Cyprus, Luxembourg, Slovenia, Croatia, Netherlands, Ireland, Bulgaria, Belgium, Hungary, Estonia, Slovakia, Lithuania, and Denmark had used for organic farming, less than 177 531 ha (2nd quartiles) from the total area of organic agriculture of EU that was about 1,084,796 ha, that means less than 11 % of the total area under organic farming in the EU, or, in the other words almost 16 % of the utilized agricultural areas of the EU. That means that, up to the year 2013, half of the EU countries had converted to organic surfaces, or undergoing conversion, less than 4% of farmland used. In the year 2014 compared with 2013, the same 14 countries, in time that their total agricultural area registered a sensible decrease, with 3.650 thousand hectares, increased their organic agricultural areas by 2 %, from 1.084.796 ha to 1.106.221 ha, each of them having up to 191 875 ha (2nd Quart, 50 %) utilised, and this, representing only 10,72 % of the total EU organic surfaces in 2014. The situation is offset by the 7 member states which have used organic surfaces exceeding 3rd Quart (520.265,75 hectares in 2013, for 516.564 in 2014): United Kingdom, Austria, Poland, Germany, France, Italy, Spain, and which together utilised over 67 % of the organic areas of EU, in conditions that account for over 65 % of agricultural areas.

Note that, for the year 2014 compare with 2013, this group of countries recorded increases both for the utilized organic area and also for total utilised agricultural area. It is obvious that one of the determining factors regarding the potential growth of organic farmland remains availability for the agricultural areas of each country. For a better overview of the distributions of the utilised agricultural area and organic agricultural area, at the end of the years 2013 and 2014 and detecting the existence of excessive values - marginal and extreme, we used the box-plot graphic representation in the figure below:

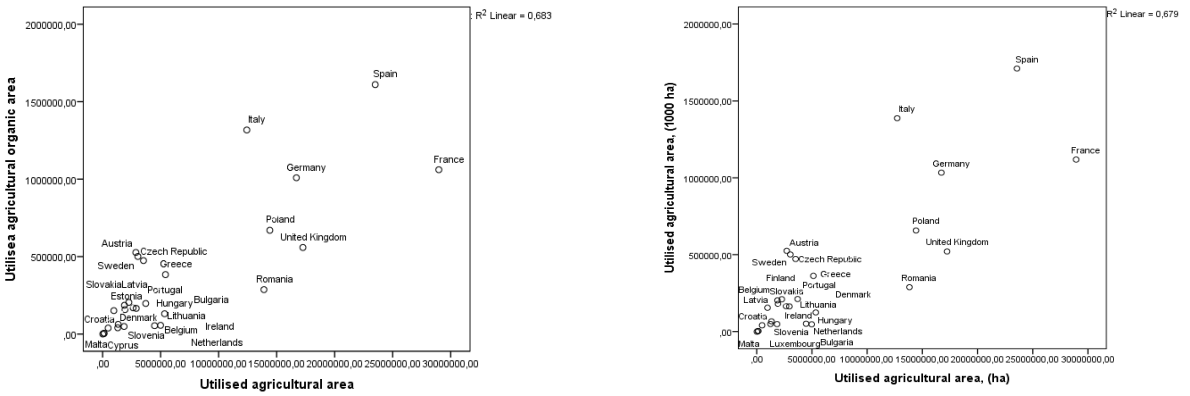


a) Utilised agricultural area b) Utilised organic agricultural area

Figure 2 – Box-Plots representation

It stands higher outliers, France and Spain in Figure 2. a), and Spain and Italy in Figure 2. b). As can be seen from the graphs in Figure 3, the agricultural area organic (converted or undergoing conversion) correlate linearly, very strongly, with total area of agricultural, the differences at national level is rather revealed that over 70 % of the total organic agricultural area in EU (28), i.e. 71,32 % in 2013 and 71,55 % in 2014, are owned only 7 of the countries, 25% of those 28, respectively France, Spain, United Kingdom, Germany, Poland, Romania and Italy, while all other 21 Member States (75%) have the remaining agricultural area. Noting however atypical situations such as Romania, which although in the category of countries with generous agricultural areas has much least 2% of the surface area organic farming, while Poland and Italy, countries with agricultural areas similar with Romania, have exceeded shares 4,57% in Poland and 11,47 % in Italy of organic surfaces in total agricultural area in 2014.

Consider that Romania remained an individual case in Europe with a great potential for grows its organic agricultural. But, with almost 89 % of its territory located in rural areas, and approximately 47,3 % of the total population that live in these regions, Romanian rural economy faces a number of problems such as predominance of subsistence agriculture, production for self-consumption largely, a great number of persons employed or working on the black and an excessive labor involved in agriculture. (Rabontu C.I, Babucea A.G, 2013). On the other hand, Austria, Sweden, and the Czech Republic, although with modest agricultural areas, is characterized by a high share of organic surfaces. EU (28) had converted or undergoing conversion in the organic agricultural area below 6 % of the agricultural area, while less than 50 % of the agricultural area (14 countries) do not provide even 30 %, so there is a very high potential for growth its organic area.



a) 2013 b) 2014

Figure 3 – Correlation between the utilised organic agricultural area and total utilised agricultural area, at the level of EU (28) member states

The degree of organic agricultural area spatial concentration according to the distribution of the organic agriculture producers can be assessed using the Lorenz curve for whose graphical representation were calculated the cumulative shares for the years 2013, respectively 2014, presented in the Table no. 3 and 4.

Table no. 3 - Algorithm for calculating the cumulative shared used for Lorenz curve graphic representation, 2013

European Union (28 countries)	Organic agricultural producers No.	Utilised agricultural organic area ha	% Organic agricultural producers	% Utilised agricultural organic area	% organic area / % organic producers	Cumulative % in organic agricultural producers	Cumulative % in utilised organic agricultural area
Malta	9	7	0,003500257	6,9509E-05	0,019858	0,00350	0,00007
Cyprus	746	4315	0,290132387	0,042847331	0,147682	0,29363	0,04292
Slovenia	3.045	38664	1,184253512	0,383927971	0,324194	1,47789	0,42684
Bulgaria	3.854	56287	1,498887696	0,558921832	0,372891	2,97677	0,98577
Greece	21.986	383606	8,550738165	3,809152527	0,445476	11,52751	4,79492
Romania	14.553	286896	5,65991506	2,848836107	0,503335	17,18743	7,64376

European Union (28 countries)	Organic agricultural producers No.	Utilised agricultural organic area ha	% Organic agricultural producers	% Utilised agricultural organic area	% organic area/ % organic producers	Cumulative % in organic agricultural producers	Cumulative % in utilised organic agricultural area
Austria	21.863	526689	8,502901324	5,229946183	0,615078	25,69033	12,87370
Poland	26.598	669863	10,34442526	6,651643456	0,643017	36,03475	19,52534
Croatia	1.583	40660	0,615656259	0,403747965	0,655801	36,65041	19,92909
Italy	45.965	1317177	17,87658873	13,07937858	0,731648	54,52700	33,00847
Netherlands	1.650	48936	0,641713726	0,485927457	0,757234	55,16871	33,49440
Belgium	1.656	62471	0,64404723	0,620328065	0,963172	55,81276	34,11473
Ireland	1.351	53812	0,52542742	0,534345437	1,016973	56,33819	34,64907
France	25.467	1060755	9,904559668	10,53314492	1,063464	66,24275	45,18222
Germany	23.271	1008926	9,050497036	10,01849039	1,106955	75,29324	55,20071
Finland	4.284	204810	1,666122182	2,033733907	1,220639	76,95937	57,23444
Spain	30.502	1610129	11,86275882	15,9883499	1,347777	88,82212	73,22279
Latvia	3.490	185752	1,357321759	1,844490702	1,358919	90,17945	75,06728
Luxembourg	83	4447	0,032280145	0,044158072	1,367964	90,21173	75,11144
Lithuania	2.570	165885	0,999517742	1,647214243	1,648009	91,21124	76,75865
Portugal	3.029	197295	1,178030833	1,959111036	1,663039	92,38928	78,71777
Denmark	2.589	169310	1,006907173	1,681224002	1,669691	93,39618	80,39899
Hungary	1.682	130990	0,654159083	1,300711901	1,988372	94,05034	81,69970
Sweden	5.584	500996	2,171714815	4,97481838	2,290733	96,22206	86,67452
Estonia	1.553	151164	0,603988737	1,501036826	2,485207	96,82605	88,17556
Czech Republic	3.910	474231	1,520667071	4,709045772	3,096697	98,34671	92,88460
United Kingdom	3.908	558718	1,519889236	5,547989557	3,650259	99,86660	98,43259
Slovakia	343	157848	0,133398671	1,567407987	11,7498	100,00000	100,00000

Source: Authors calculations from data available on Eurostat database (online data code: org_cropap, org_coptyp)

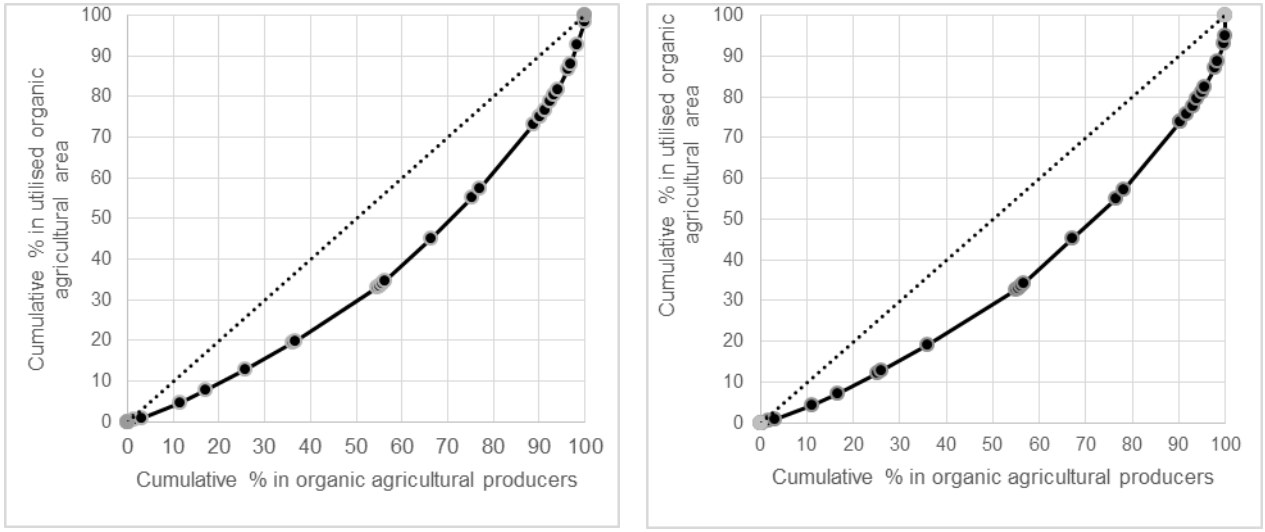
To assess the concentration of organic agriculture sector in the EU Member States (28) in 2014, the year for which data are available for all member states compared to 2013, Lorenz curve was built for 2014, too. The data required graphical representation are shown in Table 4. The graphical representations in Figure 4, a) for the year 2013 and b) for 2014, show a moderate level of concentration in both of the years, if we consider the organic agricultural producers of each country as a point of reference in assessing the utilised organic agricultural area (fully converted and under conversion), but that indicates an increase over the period considered even if it is not significant.

Table no. 4 - Algorithm for calculating the cumulative shared used for Lorenz curve graphic representation, 2014

European Union (28 countries)	Organic agricultural producers No.	Utilised agricultural organic area ha	% Organic agricultural producers	% Utilised agricultural organic area	% organic area/ % organic producers	Cumulative % in organic agricultural producers	Cumulative % in utilised organic agricultural area
Malta	10	34	0,003932	0,00033	0,083819	0,003932	0,00033
Cyprus	746	3.887	0,29336	0,037683	0,128451	0,297293	0,038012
Bulgaria	3.893	47.914	1,530899	0,464502	0,303418	1,828192	0,502515
Slovenia	3.293	41.237	1,294953	0,399772	0,308716	3,123144	0,902287
Greece	20.186	362.826	7,938025	3,517417	0,44311	11,06117	4,419704
Romania	14.151	289.252	5,564797	2,804154	0,50391	16,62597	7,223858
Austria	22.184	525.521	8,723726	5,094664	0,584001	25,34969	12,31852
Croatia	2.043	50.054	0,803398	0,485249	0,603996	26,15309	12,80377
Poland	24.829	657.902	9,763857	6,378032	0,653229	35,91695	19,1818
Italy	48.662	1.387.869	19,13604	13,4547	0,703108	55,05299	32,6365
Netherlands	1.457	49.159	0,572957	0,476572	0,831777	55,62595	33,11307
Ireland	1.275	51.871	0,501386	0,502864	1,002946	56,12733	33,61594
Belgium	1.602	66.704	0,629977	0,646662	1,026485	56,75731	34,2626
France	26.466	1.118.845	10,4076	10,84665	1,042185	67,16491	45,10924
Germany	23.717	1.033.807	9,32657	10,02224	1,074591	76,49148	55,13149
Finland	4.247	210.649	1,670108	2,042137	1,222758	78,16158	57,17363
Spain	30.602	1.710.475	12,03405	16,5822	1,37794	90,19564	73,75583
Luxembourg	79	4.490	0,031066	0,043528	1,401143	90,22671	73,79936
Latvia	3.475	203.443	1,366523	1,972279	1,443282	91,59323	75,77164
Portugal	3.329	212.346	1,309109	2,058589	1,572511	92,90234	77,83023
Denmark	2.540	165.773	0,99884	1,607087	1,608953	93,90118	79,43731
Lithuania	2.445	164.390	0,961482	1,593679	1,657524	94,86266	81,03099

European Union (28 countries)	Organic agricultural producers No.	Utilised agricultural organic area ha	% Organic agricultural producers	% Utilised agricultural organic area	% organic area/ % organic producers	Cumulative % in organic agricultural producers	Cumulative % in utilised organic agricultural area
Hungary	1.672	124.841	0,657504	1,210271	1,840705	95,52016	82,24126
Sweden	5.406	501.831	2,125877	4,865002	2,288468	97,64604	87,10626
Estonia	1.542	155.560	0,606382	1,508077	2,487006	98,25242	88,61434
Czech Republic	3.866	472.663	1,520282	4,582232	3,014068	99,7727	93,19657
Slovakia	403	180.307	0,158477	1,747987	11,02988	99,93118	94,94456
United Kingdom	175	521.475	0,068818	5,05544	73,46133	100	100

Source: Authors calculations from data available on Eurostat database (online data code: org_cropap, org_coptyp)



a) 2013 b) 2014

Figure 4 - Lorenz Curves

Concentration coefficients for each variable considered were calculated based on the data in Tables 3 and 4, the territorial concentration coefficients (territorial distributions) were determined using the concentration Gini-Struck (Gs): and presented in the Table below:

Table no. 5 - Gini-Struck coefficients for main indicators

Indicators	Gini-Struck coefficient: $G_s = \sqrt{\frac{n\sum g_i^2 - 1}{n-1}}$	
	2013	2014
Organic operators – Agricultural producers	0,247567392	0,256871603
Utilised agricultural organic area (fully converted and under conversion)	0,22256233	0,227657903

Source: Authors calculations.

The values obtained from the calculations for concentration coefficients of European Union Member States distributions show a relatively uniform, both for agricultural producers and also for the utilised agricultural organic area. So, for all these Gini-Struck coefficients values we can speak about territorial disparities. Based on the Gini-Struck coefficients for each year, small changes can be noticed, but we can see a slight increase in concentration for producers in 2014.

CONCLUSIONS

At the level of EU (28) enlargement processes can be seen for organic farming, but there is a great lag between the countries. In time that 50 % of EU - 28 countries had used for organic farming, less than 11% from the total area of organic agriculture, other 25% of them had more than 70%. There is also an increase in the average size for all the main indicators considered in the study in 2014 compared with 2013, even if in several small countries is reducing, and in the larger countries is growing. Remark countries with low potential in terms of available agricultural area,

but which have significant shares of agricultural areas of organic, as are Austria, Czech Republic, Sweden, and even Greece, but also countries with large potential, but that fail to achieve than a low level of organic agricultural area, without increases in the period considered, as Romania. Even if the utilised organic agricultural areas are in a continuous growth in the EU, most are concentrated in developed countries, and this makes that, the potential of organic farming of countries with the similar position in terms of available agricultural area, or producers is different. This determined some concentration of organic agriculture, mainly driven by higher demand in these countries for organic products, and the effectiveness of the financial support provided by the European Union through specific financing measures, laid down in the 2007-2013 Rural Development Program, which contributed to increase the number of organic producers and the development of this sector in these countries. As regional markets will develop, and the farmers will produce organic food priority for consumers in their region, organic farming will have a much higher share in the agriculture of each European countries.

BIBLIOGRAPHY

[1] Andrei, J. V., Ion, R. A., Popescu H. G., Nica, E., Zaharia M. (2016). *Implications of agricultural bioenergy crop production and prices inchanging the land use paradigm - The case of Romania, Land Use Policy, 50, 399-407.*

[2] Brumă, I. S. (2011). *Economic Studies and Research on Ecological Agricultural Production. Agronomy Series of Scientific Research/Lucrari Stiintifice, Seria Agronomie, 54(2), 348-353.*

[3] Brumă, I. S. (2014). *The Evolution of Organic Agricultural Land Areas in the Emerging Countries of the European Union. Agricultural Economics and Rural Development, 11(2), 167-179.*

[4] Codreanu, C. (2007). *Conceptul de agricultură ecologică – bază importantă pentru dezvoltarea agriculturii durabile în România, Revista Lucrări Ştiinifice, Seria Agronomie, 50 (Supliment), 298-302.*

[5] Constantin, F. (2012). *Economic performance of organic farming in Romania and European Union. Economia Seria Management, 15(1), 108-119.*

[6] Cicea, C., Subic, J. &Pirlogea, C. (2010). *Considerations regarding investments efficiency in agriculture. Economia. Seria Management, 13(2), 321-331.*

[7] Jaba, E.. (Ed.). (2002). *Statistică, Ediţia a II-a*, Editura Economică, Bucureşti.

[8] Minciu, R.. (Ed.). (2004). *Economia turismului, Ediţia a II-a*, Editura Uranus, Bucureşti.

[9] Lorenz, M. O. (1905). *Methods of Measuring the Concentration of Wealth. Publications of the American Statistical Association. Vol. 9, No. 70, 209-219.*

[10] Rabontu, C.I.,&Babucea, A. G. (2013). *Economic Aspects of the Romanian Agriculture Evolution. Education, 2087 (1064.0), 919-3.*

[11] Rusu, M. (2014), *Organic agriculture: current situation, evolutions and perspectives. In Proceedings of the International Conference Globalization, Intercultural Dialogue and National Identity*, ed.: Iulian Boldea - Tîrgu-Mureş,